SEQUENCE LISTING

<110> ML Laboratories PLC

<120> Immunosuppression

<130> P15700WO

<140> PCT/GB99/04200
<141> 1999-12-17

<150> 9827921.9
<151> 1998-12-19

<150> 9925015.1
<151> 1999-10-23

<160> 39

<170> PatentIn Ver. 2.1

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<212> PRT
<213> Homo sapiens

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Ser Gly Val Ile His Val Thr Lys Glu Val Lys Glu Val Ala Thr Leu
         35                  40                  45

Ser Cys Gly His Asn Val Ser Val Glu Glu Leu Ala Gln Thr Arg Ile
     50                  55                  60

Tyr Trp Gln Lys Glu Lys Lys Met Val Leu Thr Met Met Ser Gly Asp
 65                  70                  75                  80

Met Asn Ile Trp Pro Glu Tyr Lys Asn Arg Thr Ile Phe Asp Ile Thr
                 85                  90                  95

Asn Asn Leu Ser Ile Val Ile Leu Ala Leu Arg Pro Ser Asp Glu Gly
            100                 105                 110

Thr Tyr Glu Cys Val Val Leu Lys Tyr Glu Lys Asp Ala Phe Lys Arg
        115                 120                 125

Glu His Leu Ala Glu Val Thr Leu Ser Val Lys Ala Asp Phe Pro Thr
    130                 135                 140

Pro Ser Ile Ser Asp Phe Glu Ile Pro Thr Ser Asn Ile Arg Arg Ile
145                 150                 155                 160

Ile Cys Ser Thr Ser Gly Gly Phe Pro Glu Pro His Leu Ser Trp Leu
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Glu Asn Gly Glu Glu Leu Asn Ala Ile Asn Thr Thr Val Ser Gln Asp
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180 185 190

Pro Glu Thr Glu Leu Tyr Ala Val Ser Ser Lys Leu Asp Phe Asn Met
195 200 205

Thr Thr Asn His Ser Phe Met Cys Leu Ile Lys Tyr Gly His Leu Arg
210 215 220

Val Asn Gln Thr Phe Asn Trp Asn Thr Thr Lys Gln Glu His Phe Pro
225 230 235 240

Asp Asn Leu Leu Pro Ser Trp Ala Ile Thr Leu Ile Ser Val Asn Gly
245 250 255

Ile Phe Val Ile Cys Cys Leu Thr Tyr Cys Phe Ala Pro Arg Cys Arg
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Glu Arg Arg Arg Asn Glu Arg Leu Arg Arg Glu Ser Val Arg Pro Val
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<213> Homo sapiens

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Pro Cys Gln Phe Ala Asn Ser Gln Asn Gln Ser Leu Ser Glu Leu Val
35 40 45

Val Phe Trp Gln Asp Gln Glu Asn Leu Val Leu Asn Glu Val Tyr Leu
50 55 60

Gly Lys Glu Lys Phe Asp Ser Val His Ser Lys Tyr Met Gly Arg Thr
65 70 75 80

Ser Phe Asp Ser Asp Ser Trp Thr Leu Arg Leu His Asn Leu Gln Ile
85 90 95

Lys Asp Lys Gly Leu Tyr Gln Cys Ile Ile His His Lys Lys Pro Thr
100 105 110

Gly Met Ile Arg Ile His Gln Met Asn Ser Glu Leu Ser Val Leu Ala
115 120 125

Asn Phe Ser Gln Pro Glu Ile Val Pro Ile Ser Asn Ile Thr Glu Asn
130 135 140

Val Tyr Ile Asn Leu Thr Cys Ser Ser Ile His Gly Tyr Pro Glu Pro
145 150 155 160

Lys Lys Met Ser Val Leu Leu Arg Thr Lys Asn Ser Thr Ile Glu Tyr
165 170 175

Asp Gly Ile Met Gln Lys Ser Gln Asp Asn Val Thr Glu Leu Tyr Asp
180 185 190

Val Ser Ile Ser Leu Ser Val Ser Phe Pro Asp Val Thr Ser Asn Met
195 200 205

Thr Ile Phe Cys Ile Leu Glu Thr Asp Lys Thr Arg Leu Leu Ser Ser
210 215 220

Pro Phe Ser Ile Glu Leu Glu Asp Pro Gln Pro Pro Pro Asp His Ile
225 230 235 240

Pro Trp Ile Thr Ala Val Leu Pro Thr Val Ile Ile Cys Val Met Val
245 250 255

Phe Cys Leu Ile Leu Trp Lys Trp Lys Lys Lys Lys Arg Pro Arg Asn
260 265 270

Ser Tyr Lys Cys Gly Thr Asn Thr Met Glu Arg Glu Glu Ser Glu Gln
275 280 285

Thr Lys Lys Arg Glu Lys Ile His Ile Pro Glu Arg Ser Asp Glu Ala
290 295 300

Gln Arg Val Phe Lys Ser Ser Lys Thr Ser Ser Cys Asp Lys Ser Asp
305 310 315 320

Thr Cys Phe

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<211> 834
<212> DNA

<213> Homo sapiens

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tgccagccag gacagaaact ggtgagtgac tgcacagagt tcactgaaac ggaatgcctt 180
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aagccaacca ataaggcccc ccaccccaag caggaacccc aggagatcaa ttttcccgac 720
gatcttcctg gctccaacac tgctgctcca gtgcaggaga ctttacatgg atgccaaccg 780
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<210> 5
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<212> PRT
<213> Homo sapiens

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Ala Val His Pro Glu Pro Pro Thr Ala Cys Arg Glu Lys Gln Tyr Leu
20 25 30

Ile Asn Ser Gln Cys Cys Ser Leu Cys Gln Pro Gly Gln Lys Leu Val
35 40 45

Ser Asp Cys Thr Glu Phe Thr Glu Thr Glu Cys Leu Pro Cys Gly Glu
50 55 60

Ser Glu Phe Leu Asp Thr Trp Asn Arg Glu Thr His Cys His Gln His
65 70 75 80

Lys Tyr Cys Asp Pro Asn Leu Gly Leu Arg Val Gln Gln Lys Gly Thr
85 90 95

Ser Glu Thr Asp Thr Ile Cys Thr Cys Glu Glu Gly Trp His Cys Thr
100 105 110

Ser Glu Ala Cys Glu Ser Cys Val Leu His Arg Ser Cys Ser Pro Gly
115 120 125

Phe Gly Val Lys Gln Ile Ala Thr Gly Val Ser Asp Thr Ile Cys Glu
130 135 140

Pro Cys Pro Val Gly Phe Phe Ser Asn Val Ser Ser Ala Phe Glu Lys
145 150 155 160

Cys His Pro Trp Thr Ser Cys Glu Thr Lys Asp Leu Val Val Gln Gln
165 170 175

Ala Gly Thr Asn Lys Thr Asp Val Val Cys Gly Pro Gln Asp Arg Leu
180 185 190

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Arg Ala Leu Val Val Ile Pro Ile Ile Phe Gly Ile Leu Phe Ala Ile
        195                 200                 205

Leu Leu Val Leu Val Phe Ile Lys Lys Val Ala Lys Lys Pro Thr Asn
    210                 215                 220

Lys Ala Pro His Pro Lys Gln Glu Pro Gln Glu Ile Asn Phe Pro Asp
225                 230                 235                 240

Asp Leu Pro Gly Ser Asn Thr Ala Ala Pro Val Gln Glu Thr Leu His
                245                 250                 255

Gly Cys Gln Pro Val Thr Gln Glu Asp Gly Lys Glu Ser Arg Ile Ser
            260                 265                 270

Val Gln Glu Arg Gln
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<210> 6
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<212> PRT
<213> Homo sapiens

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             20                  25                  30

Ala Gln Ile Gly Asp Ser Val Ser Leu Thr Cys Ser Thr Thr Gly Cys
         35                  40                  45

Glu Ser Pro Phe Phe Ser Trp Arg Thr Gln Ile Asp Ser Pro Leu Asn
     50                  55                  60

Gly Lys Val Thr Asn Glu Gly Thr Thr Ser Thr Leu Thr Met Asn Pro
 65                  70                  75                  80

Val Ser Phe Gly Asn Glu His Ser Tyr Leu Cys Thr Ala Thr Cys Glu
                 85                  90                  95

Ser Arg Lys Leu Glu Lys Gly Ile Gln Val Glu Ile Tyr Ser Phe Pro
            100                 105                 110

Lys Asp Pro Glu Ile His Leu Ser Gly Pro Leu Glu Ala Gly Lys Pro
        115                 120                 125

Ile Thr Val Lys Cys Ser Val Ala Asp Val Tyr Pro Phe Asp Arg Leu
    130                 135                 140

Glu Ile Asp Leu Leu Lys Gly Asp His Leu Met Lys Ser Gln Glu Phe
145                 150                 155                 160

Leu Glu Asp Ala Asp Arg Lys Ser Leu Glu Thr Lys Ser Leu Glu Val
                165                 170                 175

Thr Phe Thr Pro Val Ile Glu Asp Ile Gly Lys Val Leu Val Cys Arg
            180                 185                 190
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Ala Lys Leu His Ile Asp Glu Met Asp Ser Val Pro Thr Val Arg Gln
195 200 205

Ala Val Lys Glu Leu Gln Val Tyr Ile Ser Pro Lys Asn Thr Val Ile
210 215 220

Ser Val Asn Pro Ser Thr Lys Leu Gln Glu Gly Gly Ser Val Thr Met
225 230 235 240

Thr Cys Ser Ser Glu Gly Leu Pro Ala Pro Glu Ile Phe Trp Ser Lys
245 250 255

Lys Leu Asp Asn Gly Asn Leu Gln His Leu Ser Gly Asn Ala Thr Leu
260 265 270

Thr Leu Ile Ala Met Arg Met Glu Asp Ser Gly Ile Tyr Val Cys Glu
275 280 285

Gly Val Asn Leu Ile Gly Lys Asn Arg Lys Glu Val Glu Leu Ile Val
290 295 300

Gln Glu Lys Pro Phe Thr Val Glu Ile Ser Pro Gly Pro Arg Ile Ala
305 310 315 320

Ala Gln Ile Gly Asp Ser Val Met Leu Thr Cys Ser Val Met Gly Cys
325 330 335

Glu Ser Pro Ser Phe Ser Trp Arg Thr Gln Ile Asp Ser Pro Leu Ser
340 345 350

Gly Lys Val Arg Ser Glu Gly Thr Asn Ser Thr Leu Thr Leu Ser Pro
355 360 365

Val Ser Phe Glu Asn Glu His Ser Tyr Leu Cys Thr Val Thr Cys Gly
370 375 380

His Lys Lys Leu Glu Lys Gly Ile Gln Gly Glu Leu Tyr Ser Phe Pro
385 390 395 400

Arg Asp Pro Glu Ile Glu Met Ser Gly Gly Leu Val Asn Gly Ser Ser
405 410 415

Cys Thr Val Ser Cys Lys Val Pro Ser Val Tyr Pro Leu Asp Arg Leu
420 425 430

Glu Ile Glu Leu Leu Lys Gly Glu Thr Ile Leu Glu Asn Ile Glu Phe
435 440 445

Leu Glu Asp Thr Asp Met Lys Ser Leu Glu Asn Lys Ser Leu Glu Met
450 455 460

Thr Phe Ile Pro Thr Ile Glu Asp Thr Gly Lys Ala Leu Val Cys Gln
465 470 475 480

Ala Lys Leu His Ile Asp Asp Met Glu Phe Glu Pro Lys Gln Arg Gln
485 490 495

Ser Thr Gln Thr Leu Tyr Val Asn Val Ala Pro Arg Asp Thr Thr Val
500 505 510

Leu Val Ser Pro Ser Ser Ile Leu Glu Glu Gly Ser Ser Val Asn Met

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        515                 520                 525

Thr Cys Leu Ser Gln Gly Phe Pro Ala Pro Lys Ile Leu Trp Ser Arg
    530                 535                 540

Gln Leu Pro Asn Gly Glu Leu Gln Pro Leu Ser Glu Asn Ala Thr Leu
545                 550                 555                 560

Thr Leu Ile Ser Thr Lys Met Glu Asp Ser Gly Val Tyr Leu Cys Glu
                565                 570                 575

Gly Ile Asn Gln Ala Gly Arg Ser Arg Lys Glu Val Glu Leu Ile Ile
            580                 585                 590

Gln Val Thr Pro Lys Asp Ile Lys Leu Thr Ala Phe Pro Ser Glu Ser
        595                 600                 605

Val Lys Glu Gly Asp Thr Val Ile Ile Ser Cys Thr Cys Gly Asn Val
    610                 615                 620

Pro Glu Thr Trp Ile Ile Leu Lys Lys Lys Ala Glu Thr Gly Asp Thr
625                 630                 635                 640

Val Leu Lys Ser Ile Asp Gly Ala Tyr Thr Ile Arg Lys Ala Gln Leu
                645                 650                 655

Lys Asp Ala Gly Val Tyr Glu Cys Glu Ser Lys Asn Lys Val Gly Ser
            660                 665                 670

Gln Leu Arg Ser Leu Thr Leu Asp Val Gln Gly Arg Glu Asn Asn Lys
        675                 680                 685

Asp Tyr Phe Ser Pro Glu Leu Leu Val Leu Tyr Phe Ala Ser Ser Leu
    690                 695                 700

Ile Ile Pro Ala Ile Gly Met Ile Ile Tyr Phe Ala Arg Lys Ala Asn
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Met Lys Gly Ser Tyr Ser Leu Val Glu Ala Gln Lys Ser Lys Val
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<212> DNA
<213> Mus musculus

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ccttgccgtt acaactctcc tcatgaagat gagtctgaag accgaatcta ctggcaaaaa 240
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aaccggactt tatatgacaa cactacctac tctcttatca tcctgggcct ggtcctttca 360
gaccggggca catacagctg tgtcgttcaa aagaaggaaa gaggaacgta tgaagttaaa 420
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tcccaggatc ctgaatctga attgtacacc attagtagcc aactagattt caatacgact 660
cgcaaccaca ccattaagtg tctcattaaa tatggagatg ctcacgtgtc agaggacttc 720
acctgggaaa aacccccaga agaccctcct gatagcaaga acacacttgt gctctttggg 780

gcaggattcg gcgcagtaat aacagtcgtc gtcatcgttg tcatcatcaa atgcttctgt 840
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<211> 314
<212> PRT
<213> Mus musculus

<400> 8
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Phe Val Leu Leu Ile Arg Leu Ser Gln Val Ser Ser Asp Val Asp Glu
35 40 45

Gln Leu Ser Lys Ser Val Lys Asp Lys Val Leu Leu Pro Cys Arg Tyr
50 55 60

Asn Ser Pro His Glu Asp Glu Ser Glu Asp Arg Ile Tyr Trp Gln Lys
65 70 75 80

His Asp Lys Val Val Leu Ser Val Ile Ala Gly Lys Leu Lys Val Trp
85 90 95

Pro Glu Tyr Lys Asn Arg Thr Leu Tyr Asp Asn Thr Thr Tyr Ser Leu
100 105 110

Ile Ile Leu Gly Leu Val Leu Ser Asp Arg Gly Thr Tyr Ser Cys Val
115 120 125

Val Gln Lys Lys Glu Arg Gly Thr Tyr Glu Val Lys His Leu Ala Leu
130 135 140

Val Lys Leu Ser Ile Lys Ala Asp Phe Ser Thr Pro Asn Ile Thr Glu
145 150 155 160

Ser Gly Asn Pro Ser Ala Asp Thr Lys Arg Ile Thr Cys Phe Ala Ser
165 170 175

Gly Gly Phe Pro Lys Pro Arg Phe Ser Trp Leu Glu Asn Gly Arg Glu
180 185 190

Leu Pro Gly Ile Asn Thr Thr Ile Ser Gln Asp Pro Glu Ser Glu Leu
195 200 205

Tyr Thr Ile Ser Ser Gln Leu Asp Phe Asn Thr Thr Arg Asn His Thr
210 215 220

Ile Lys Cys Leu Ile Lys Tyr Gly Asp Ala His Val Ser Glu Asp Phe
225 230 235 240

Thr Trp Glu Lys Pro Pro Glu Asp Pro Pro Asp Ser Lys Asn Thr Leu
245 250 255

Val Leu Phe Gly Ala Gly Phe Gly Ala Val Ile Thr Val Val Val Ile
260 265 270

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Val Val Ile Ile Lys Cys Phe Cys Lys His Arg Ser Cys Phe Arg Arg
        275                 280                 285

Asn Glu Ala Ser Arg Glu Thr Asn Asn Ser Leu Thr Phe Gly Pro Glu
    290                 295                 300

Glu Ala Leu Ala Glu Gln Thr Val Phe Leu
305                 310
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<212> DNA
<213> Mus musculus

<400> 9

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<210> 10
<211> 309
<212> PRT
<213> Mus musculus

<400> 10

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             20                  25                  30

Asn Gly Thr Ala Tyr Leu Pro Cys Pro Phe Thr Lys Ala Gln Asn Ile
         35                  40                  45

Ser Leu Ser Glu Leu Val Val Phe Trp Gln Asp Gln Gln Lys Leu Val
     50                  55                  60

Leu Tyr Glu His Tyr Leu Gly Thr Glu Lys Leu Asp Ser Val Asn Ala
 65                  70                  75                  80

Lys Tyr Leu Gly Arg Thr Ser Phe Asp Arg Asn Asn Trp Thr Leu Arg
                 85                  90                  95

Leu His Asn Val Gln Ile Lys Asp Met Gly Ser Tyr Asp Cys Phe Ile
            100                 105                 110
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Gln Lys Lys Pro Pro Thr Gly Ser Ile Ile Leu Gln Gln Thr Leu Thr
        115                 120                 125

Glu Leu Ser Val Ile Ala Asn Phe Ser Glu Pro Glu Ile Lys Leu Ala
    130                 135                 140

Gln Asn Val Thr Gly Asn Ser Gly Ile Asn Leu Thr Cys Thr Ser Lys
145                 150                 155                 160

Gln Gly His Pro Lys Pro Lys Lys Met Tyr Phe Leu Ile Thr Asn Ser
                165                 170                 175

Thr Asn Glu Tyr Gly Asp Asn Met Gln Ile Ser Gln Asp Asn Val Thr
            180                 185                 190

Glu Leu Phe Ser Ile Ser Asn Ser Leu Ser Leu Ser Phe Pro Asp Gly
        195                 200                 205

Val Trp His Met Thr Val Val Cys Val Leu Glu Thr Glu Ser Met Lys
    210                 215                 220

Ile Ser Ser Lys Pro Leu Asn Phe Thr Gln Glu Phe Pro Ser Pro Gln
225                 230                 235                 240

Thr Tyr Trp Lys Glu Ile Thr Ala Ser Val Thr Val Ala Leu Leu Leu
                245                 250                 255

Val Met Leu Leu Ile Ile Val Cys His Lys Lys Pro Asn Gln Pro Ser
            260                 265                 270

Arg Pro Ser Asn Thr Ala Ser Lys Leu Glu Arg Asp Ser Asn Ala Asp
        275                 280                 285

Arg Glu Thr Ile Asn Leu Lys Glu Leu Glu Pro Gln Ile Ala Ser Ala
    290                 295                 300

Lys Pro Asn Ala Glu
305
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<211> 870
<212> DNA
<213> Mus musculus

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tgccagccag gaagccgact gacaagccac tgcacagctc ttgagaagac ccaatgccac 180
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<210> 12
<211> 289
<212> PRT
<213> Mus musculus

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His Asp Gly Gln Cys Cys Asp Leu Cys Gln Pro Gly Ser Arg Leu Thr
35 40 45

Ser His Cys Thr Ala Leu Glu Lys Thr Gln Cys His Pro Cys Asp Ser
50 55 60

Gly Glu Phe Ser Ala Gln Trp Asn Arg Glu Ile Arg Cys His Gln His
65 70 75 80

Arg His Cys Glu Pro Asn Gln Gly Leu Arg Val Lys Lys Glu Gly Thr
85 90 95

Ala Glu Ser Asp Thr Val Cys Thr Cys Lys Glu Gly Gln His Cys Thr
100 105 110

Ser Lys Asp Cys Glu Ala Cys Ala Gln His Thr Pro Cys Ile Pro Gly
115 120 125

Phe Gly Val Met Glu Met Ala Thr Glu Thr Thr Asp Thr Val Cys His
130 135 140

Pro Cys Pro Val Gly Phe Phe Ser Asn Gln Ser Ser Leu Phe Glu Lys
145 150 155 160

Cys Tyr Pro Trp Thr Ser Cys Glu Asp Lys Asn Leu Glu Val Leu Gln
165 170 175

Lys Gly Thr Ser Gln Thr Asn Val Ile Cys Gly Leu Lys Ser Arg Met
180 185 190

Arg Ala Leu Leu Val Ile Pro Val Val Met Gly Ile Leu Ile Thr Ile
195 200 205

Phe Gly Val Phe Leu Tyr Ile Lys Lys Val Val Lys Lys Pro Lys Asp
210 215 220

Asn Glu Met Leu Pro Pro Ala Ala Arg Arg Gln Asp Pro Gln Glu Met
225 230 235 240

Glu Asp Tyr Pro Gly His Asn Thr Ala Ala Pro Val Gln Glu Thr Leu
245 250 255

His Gly Cys Gln Pro Val Thr Gln Glu Asp Gly Lys Glu Ser Arg Ile
260 265 270

Ser Val Gln Glu Arg Gln Val Thr Asp Ser Ile Ala Leu Arg Pro Leu

275 280 285

Val

<210> 13
<211> 994
<212> DNA
<213> Porcus spp

<400> 13
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aacctaagcc tggatgagct ggtcatattt tggcaggacc aggataacct ggttctctac 180
gagctatacc gaggccaaga gaagcctcat aatgttaatt ccaagtatat gggtcgcaca 240
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tcatatcaat gtttcatcca tcataaaggg ccgcatggac ttgttcctat ccaccagatg 360
agttctgacc tatcattgct tgctaacttc agtcaacctg aaataaacct acttactaat 420
cacacagaaa attctgtcat aaatttgacc tgctcatcta cacaaggcta cccagaaccc 480
cagaggatgt atatgttgct aaatacgaag aattcaacca ctgagcatga tgctgacatg 540
aagaaatctc aaaataacat cacggaactc tacaatgtat caatcagggt gtctcttccc 600
atccctcccg agacaaatgt gagcatcgtc tgtgtcctgc aacttgagcc aagcaagaca 660
ctgcttttct ccctaccttg taatatagat gcaaagccac ctgtgcaacc ccctgtccca 720
gaccacatcc tctggattgc agctctactt gtaacagtgg tcgttgtgtg tgggatggtg 780
tcctttgtaa cactaaggaa aaggaagaag aagcagcctg gcccctctaa tgaatgtggt 840
gaaaccatca aaatgaacag gaaggcgagt gaacaaacta agaacagagc agaagtccat 900
gaacgatctg atgatgccca gtgtgatgtt aatattttaa agacagcctc agatgacaac 960
agtactacag atttttaatt aaagagtaaa ctcc 994

<210> 14
<211> 330
<212> PRT
<213> Porcus spp

<400> 14
Met Gly Leu Ser Asn Ile Leu Phe Val Met Val Leu Leu Leu Ser Gly
1 5 10 15

Ala Ala Ser Leu Lys Ser Gln Ala Tyr Phe Asn Glu Thr Gly Glu Leu
20 25 30

Pro Cys His Phe Thr Asn Ser Gln Asn Leu Ser Leu Asp Glu Leu Val
35 40 45

Ile Phe Trp Gln Asp Gln Asp Asn Leu Val Leu Tyr Glu Leu Tyr Arg
50 55 60

Gly Gln Glu Lys Pro His Asn Val Asn Ser Lys Tyr Met Gly Arg Thr
65 70 75 80

Ser Phe Asp Gln Ala Thr Trp Thr Leu Arg Leu His Asn Val Gln Ile
85 90 95

Lys Asp Lys Gly Ser Tyr Gln Cys Phe Ile His His Lys Gly Pro His
100 105 110

Gly Leu Val Pro Ile His Gln Met Ser Ser Asp Leu Ser Leu Leu Ala
115 120 125

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Asn Phe Ser Gln Pro Glu Ile Asn Leu Leu Thr Asn His Thr Glu Asn
    130                 135                 140

Ser Val Ile Asn Leu Thr Cys Ser Ser Thr Gln Gly Tyr Pro Glu Pro
145                 150                 155                 160

Gln Arg Met Tyr Met Leu Leu Asn Thr Lys Asn Ser Thr Thr Glu His
                165                 170                 175

Asp Ala Asp Met Lys Lys Ser Gln Asn Asn Ile Thr Glu Leu Tyr Asn
            180                 185                 190

Val Ser Ile Arg Val Ser Leu Pro Ile Pro Pro Glu Thr Asn Val Ser
        195                 200                 205

Ile Val Cys Val Leu Gln Leu Glu Pro Ser Lys Thr Leu Leu Phe Ser
    210                 215                 220

Leu Pro Cys Asn Ile Asp Ala Lys Pro Pro Val Gln Pro Pro Val Pro
225                 230                 235                 240

Asp His Ile Leu Trp Ile Ala Ala Leu Leu Val Thr Val Val Val Val
                245                 250                 255

Cys Gly Met Val Ser Phe Val Thr Leu Arg Lys Arg Lys Lys Lys Gln
            260                 265                 270

Pro Gly Pro Ser Asn Glu Cys Gly Glu Thr Ile Lys Met Asn Arg Lys
        275                 280                 285

Ala Ser Glu Gln Thr Lys Asn Arg Ala Glu Val His Glu Arg Ser Asp
    290                 295                 300

Asp Ala Gln Cys Asp Val Asn Ile Leu Lys Thr Ala Ser Asp Asp Asn
305                 310                 315                 320

Ser Thr Thr Asp Phe Leu Lys Ser Lys Leu
                325                 330


<210> 15
<211> 837
<212> DNA
<213> Porcus

<400> 15
atggttcgtt tgcctctgca gtgtctcctc tggggctgct ttttgaccgc cgtccaccca 60
gaaccaccca cttcatgcaa agaaaaccaa tacccaacaa acagccggtg ctgtaatttg 120
tgcccgccag gacagaaact ggtgaaccac tgcacagagg tcactgaaac agaatgcctt 180
ccttgcagtt ccagcgaatt cctagccacc tggaatagag agaaacactg tcatcagcac 240
aaatactgcg accccaacct aggtctccag gtccagaggg agggcacctc gaaaacagac 300
accacttgtg tgtgcagtga aggccatcac tgtaccaaca gcgcctgtga aagttgcacc 360
ttgcacagct tgtgcttccc tggcctcggg gtcaagcaga tggcgacaga ggtttctgac 420
actatctgtg aaccctgccc agttggcttc ttctccaatg tatcatctgc ttcagaaaag 480
tgtcagcctt ggacaagctg cgagagcaaa ggcctggtgg aacaacgtgc ggggactaac 540
aagaccgatg ttgtctgtgg tttccagagt cggatgagag ccctggtggt tatccccatc 600
acgctgggga tcctgtttgc cgtcctgttg gtatttctct gtatcagaaa ggtgaccaag 660
gagcaggaga ctaaggccct gcaccctaag actgaaaggc aggatcccgt ggagacgatt 720
gatctggagg attttcccga ctccaccgct ccggtgcagg agaccttaca ttggtgccag 780
cccgtcaccc aggaggacgg caaagagagt cgcatctcag tgcaggagag acagtga    837
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<210> 16
<211> 278
<212> PRT
<213> Porcus

<400> 16
Met Val Arg Leu Pro Leu Gln Cys Leu Leu Trp Gly Cys Phe Leu Thr
 1               5                  10                  15

Ala Val His Pro Glu Pro Pro Thr Ser Cys Lys Glu Asn Gln Tyr Pro
            20                  25                  30

Thr Asn Ser Arg Cys Cys Asn Leu Cys Pro Pro Gly Gln Lys Leu Val
        35                  40                  45

Asn His Cys Thr Glu Val Thr Glu Thr Glu Cys Leu Pro Cys Ser Ser
    50                  55                  60

Ser Glu Phe Leu Ala Thr Trp Asn Arg Glu Lys His Cys His Gln His
65                  70                  75                  80

Lys Tyr Cys Asp Pro Asn Leu Gly Leu Gln Val Gln Arg Glu Gly Thr
                85                  90                  95

Ser Lys Thr Asp Thr Thr Cys Val Cys Ser Glu Gly His His Cys Thr
            100                 105                 110

Asn Ser Ala Cys Glu Ser Cys Thr Leu His Ser Leu Cys Phe Pro Gly
        115                 120                 125

Leu Gly Val Lys Gln Met Ala Thr Glu Val Ser Asp Thr Ile Cys Glu
    130                 135                 140

Pro Cys Pro Val Gly Phe Phe Ser Asn Val Ser Ser Ala Ser Glu Lys
145                 150                 155                 160

Cys Gln Pro Trp Thr Ser Cys Glu Ser Lys Gly Leu Val Glu Gln Arg
                165                 170                 175

Ala Gly Thr Asn Lys Thr Asp Val Val Cys Gly Phe Gln Ser Arg Met
            180                 185                 190

Arg Ala Leu Val Val Ile Pro Ile Thr Leu Gly Ile Leu Phe Ala Val
        195                 200                 205

Leu Leu Val Phe Leu Cys Ile Arg Lys Val Thr Lys Glu Gln Glu Thr
    210                 215                 220

Lys Ala Leu His Pro Lys Thr Glu Arg Gln Asp Pro Val Glu Thr Ile
225                 230                 235                 240

Asp Leu Glu Asp Phe Pro Asp Ser Thr Ala Pro Val Gln Glu Thr Leu
                245                 250                 255

His Trp Cys Gln Pro Val Thr Gln Glu Asp Gly Lys Glu Ser Arg Ile
            260                 265                 270

Ser Val Gln Glu Arg Gln
        275
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<210> 17
<211> 534
<212> PRT
<213> Porcus

<400> 17

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Ile Val Val Ile Phe Gly Ala Ser Asn Ile Leu Trp Met Val Phe Ala
  1               5                  10                  15

Val Ser Gln Asn Val Lys Val Glu Ile Phe Pro Glu Asp Lys Met Ile
             20                  25                  30

Ala Gln Ile Gly Asp Ser Ala Ser Leu Thr Cys Ser Ala Pro Asp Cys
         35                  40                  45

Glu Ser Ser Leu Ser Phe Ser Trp Arg Thr Gln Ile Asp Ser Pro Leu
     50                  55                  60

Asn Gly Lys Val Lys Thr Asn Gly Thr Arg Ser Thr Leu Val Met Asn
 65                  70                  75                  80

Pro Val Ser Phe Glu Asn Glu His Ser Tyr Leu Cys Thr Val Ser Cys
                 85                  90                  95

Gly Asn Leu Lys Gly Glu Arg Gly Ile Gln Val Glu Ile Tyr Ser Phe
            100                 105                 110

Pro Lys Asp Pro Glu Ile His Trp Ser Ser Leu Pro Glu Val Gly Lys
        115                 120                 125

Pro Val Thr Val Arg Cys Leu Val Pro Asp Val Tyr Pro Val Glu Lys
    130                 135                 140

Leu Glu Ile Glu Leu Leu Lys Asp Asn His Ser Met Val Ser Gln Asn
145                 150                 155                 160

Phe Leu Glu Leu Ile Asp Ile Lys Ser Lys Glu Thr Lys Ser Leu Glu
                165                 170                 175

Phe Thr Phe Thr Pro Thr Glu Glu Asp Ile Gly Lys Ala Ile Val Cys
            180                 185                 190

Gln Ala Thr Leu Ile Ile Asp Gly Gln Pro Ser Val Lys Thr Thr Pro
        195                 200                 205

Glu Lys Met Gln Val Tyr Ile Ser Pro Lys Asp Pro Val Ile Ser Val
    210                 215                 220

Asn Pro Ser Thr Ser Leu Gln Glu Gly Asp Ser Met Met Met Thr Cys
225                 230                 235                 240

Thr Ser Glu Gly Leu Pro Ala Pro Gln Ile Ser Trp Ser Lys Lys Leu
                245                 250                 255

Asp Asn Gly Asp Gln Gln Leu Leu Ser Gly Asn Ala Thr Leu Thr Leu
            260                 265                 270

Ile Ala Met Arg Met Glu Asp Ser Gly Ile Tyr Val Cys Glu Gly Val
        275                 280                 285
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Asn Pro Val Gly Thr Asn Arg Lys Glu Val Glu Leu Thr Val Gln Val
290 295 300

Ala Pro Arg Asp Thr Thr Ile Ser Val Asn Pro Ser Ser Thr Leu Glu
305 310 315 320

Glu Gly Ser Ser Val Asn Met Thr Cys Ser Ser Asp Gly Phe Pro Ala
325 330 335

Pro Lys Ile Leu Trp Ser Lys Lys Leu Arg Asp Gly Asn Leu Glu Pro
340 345 350

Leu Ser Glu Asn Thr Thr Leu Thr Leu Thr Ser Thr Lys Met Glu Asp
355 360 365

Ser Gly Ile Tyr Val Cys Glu Gly Ile Asn Gln Ala Gly Ile Asn Arg
370 375 380

Lys Glu Val Glu Leu Ile Ile Gln Ala Ala Pro Lys Asp Leu Gln Leu
385 390 395 400

Thr Ala Phe Pro Ser Glu Ser Val Lys Glu Gly Asp Thr Val Ile Ile
405 410 415

Ser Cys Thr Cys Gly Asn Val Pro Pro Thr Leu Ile Ile Leu Lys Lys
420 425 430

Lys Ala Glu Thr Gly Asp Thr Val Leu Lys Ser Thr Asp Gly Ala Tyr
435 440 445

Thr Ile His Arg Ala Arg Leu Ala Asp Ala Gly Val Tyr Glu Cys Glu
450 455 460

Ser Lys Asn Glu Ile Gly Leu Gln Leu Arg Ser Ile Thr Leu Asp Val
465 470 475 480

Lys Gly Arg Glu Ser Asn Lys Asp Tyr Phe Ser Ser Glu Leu Leu Val
485 490 495

Leu Tyr Cys Ala Ser Ser Leu Ile Ile Pro Ala Ile Gly Val Ile Ile
500 505 510

Tyr Phe Ala Arg Lys Ala Asn Met Arg Gly Ser Tyr Ser Leu Val Asp
515 520 525

Ala Gln Lys Ser Lys Val
530

<210> 18
<211> 807
<212> DNA
<213> Vacca spp

<400> 18
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gaaccagcca ctgcttgtgg agagaagcaa tacccagtga acagtctttg ctgtgatttg 120
tgcccgccgg gacagaaact ggtgaacgac tgcacagagg tcagcaaaac agaatgccag 180
tcctgcggta aaggcgaatt cttgtccacc tggaacagag agaaatactg tcacgagcac 240
agatactgca accccaacct agggctccgg atccagagcg agggtacctt gaatacagac 300
accatttgtg tatgtgtcga aggccaacac tgtaccagtc acacctgcga aagttgcacg 360

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ccccacagct tgtgtctccc tggcttcggg gtcaagcaga tcgctacagg gcttttggat 420
accgtctgtg aaccctgccc gctcggcttc ttctccaacg tgtcatctgc ttttgaaaag 480
tgtcaccgtt ggacaagctg cgagagaaaa ggcctggtgg aacaacacgt ggggacgaac 540
aagacagatg ttgtctgcgg tttccagagt cggatgagga ccctggtggt gatccccgtc 600
acgatgggag tcttgtttgc tgtcctgttg gtatctgcct gtatcaggaa cataaccaag 660
aagcggcagc taaggccctg caccctatgg ctgaaaggca ggatcccgtg gagacgattg 720
atccggagga ttttcccggc ccccacccgc ctctccggtg caagagacct tatgctggtg 780
tcagccggtc gcccaggagg acggcaa                                     807
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<210> 19
<211> 269
<212> PRT
<213> Vacca spp

<400> 19

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Met Val Arg Leu Pro Leu Gln Cys Leu Phe Trp Gly Phe Phe Leu Thr
  1               5                  10                  15

Ala Val His Ser Glu Pro Ala Thr Ala Cys Gly Glu Lys Gln Tyr Pro
             20                  25                  30

Val Asn Ser Leu Cys Cys Asp Leu Cys Pro Pro Gly Gln Lys Leu Val
         35                  40                  45

Asn Asp Cys Thr Glu Val Ser Lys Thr Glu Cys Gln Ser Cys Gly Lys
     50                  55                  60

Gly Glu Phe Leu Ser Thr Trp Asn Arg Glu Lys Tyr Cys His Glu His
 65                  70                  75                  80

Arg Tyr Cys Asn Pro Asn Leu Gly Leu Arg Ile Gln Ser Glu Gly Thr
                 85                  90                  95

Leu Asn Thr Asp Thr Ile Cys Val Cys Val Glu Gly Gln His Cys Thr
            100                 105                 110

Ser His Thr Cys Glu Ser Cys Thr Pro His Ser Leu Cys Leu Pro Gly
        115                 120                 125

Phe Gly Val Lys Gln Ile Ala Thr Gly Leu Leu Asp Thr Val Cys Glu
    130                 135                 140

Pro Cys Pro Leu Gly Phe Phe Ser Asn Val Ser Ser Ala Phe Glu Lys
145                 150                 155                 160

Cys His Arg Trp Thr Ser Cys Glu Arg Lys Gly Leu Val Glu Gln His
                165                 170                 175

Val Gly Thr Asn Lys Thr Asp Val Val Cys Gly Phe Gln Ser Arg Met
            180                 185                 190

Arg Thr Leu Val Val Ile Pro Val Thr Met Gly Val Leu Phe Ala Val
        195                 200                 205

Leu Leu Val Ser Ala Cys Ile Arg Asn Ile Thr Lys Lys Arg Gln Leu
    210                 215                 220

Arg Pro Cys Thr Leu Trp Leu Lys Gly Arg Ile Pro Trp Arg Arg Leu
225                 230                 235                 240
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Ile Arg Arg Ile Phe Pro Ala Pro Thr Arg Leu Ser Gly Ala Arg Asp
245 250 255

Leu Met Leu Val Ser Ala Gly Arg Pro Gly Gly Arg Gln
260 265

<210> 20
<211> 867
<212> DNA
<213> Vacca spp

<400> 20
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cagctcttgg tgctggctgg tctttctcac ttctgttcag gtgttatcca cgtgaccaag 120
gaagtgaaag aagtggcaac gctgtcctgt ggtcacaatg tttctgttga agagctggca 180
caaactcgca tctactggca aaaggagaag aaaatggtgc tgactatgat gtctggggac 240
atgaatatat ggcccgagta caagaaccgg accatctttg atatcactaa taacctctcc 300
attgtgatcc tggctctgcg cccatctgac gagggcacat acgagtgtgt tgttctgaag 360
tatgaaaaag acgctttcaa gcgggaacac ctggctgaag tgacgttatc agtcaaagct 420
gacttcccta cacctagtat atctgacttt gaaattccaa cttctaatat tagaaggata 480
atttgctcaa cctctggagg ttttccagag cctcacctct cctggttgga aaatggagaa 540
gaattaaatg ccatcaacac aacagtttcc caagatcctg aaactgagct ctatgctgtt 600
agcagcaaac tggatttcaa tatgacaacc aaccacagct tcatgtgtct catcaagtat 660
ggacatttaa gagtgaatca gaccttcaac tggaatacaa ccaagcaaga gcattttcct 720
gataacctgc tcccatcctg ggccattacc ttaatctcag taaatggaat ttttgtgata 780
tgctgcctga cctactgctt tgccccaaga tgcagagaga gaaggaggaa tgagagattg 840
agaagggaaa gtgtacgccc tgtataa 867

<210> 21
<211> 35
<212> DNA
<213> Porcus spp

<400> 21
gcatggatcc atgggactga gtaacattct ctttg 35

<210> 22
<211> 34
<212> DNA
<213> Porcus

<400> 22
gcatgtcgac ttaaaaatct gtagtactgt tgtc 34

<210> 23
<211> 17
<212> DNA
<213> Porcus

<400> 23
agaccgtctt cctttag 17

<210> 24
<211> 21
<212> DNA
<213> Porcus

<400> 24
ttggatcctc catgttatcc c 21

<210> 25
<211> 12
<212> DNA
<213> Porcus

<400> 25
agcatctgaa gc 12

<210> 26
<211> 22
<212> DNA
<213> Porcus spp

<400> 26
atggatcctc cattttccaa cc 22

<210> 27
<211> 18
<212> DNA
<213> Porcus spp

<400> 27
ttgtcgacat ctactggc 18

<210> 28
<211> 58
<212> DNA
<213> Porcus spp

<400> 28
ggatcctcac tgtctctcct gatgagatgc gactctcctc tttgcccgtc cgtcctcc 58

<210> 29
<211> 29
<212> DNA
<213> Porcus spp

<400> 29
gaattcatgg ttctgttgcc tctgcagtg 29

<210> 30
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Porcus spp/ovalbumen chimeric peptide

<400> 30
Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly

1 5 10 15

Arg Ser Phe Asp Gln Ala Thr Trp Thr Leu Arg
20 25

<210> 31
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Porcus spp/ovalbumen chimeric peptide

<400> 31
Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly
1 5 10 15

Arg Leu Pro Cys His Phe Thr Asn Ser Gln
20 25

<210> 32
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Porcus spp/ovalbumen chimeric peptide

<400> 32
Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly
1 5 10 15

Arg Lys Gly Pro His Gly Leu Val Pro Ile His Gln Met Ser
20 25 30

<210> 33
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Porcus spp/ovalbumen chimeric peptide

<400> 33
Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly
1 5 10 15

Arg Gly Leu Val Pro Ile His Gln Met Ser
20 25

<210> 34
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Porcus spp/ovalbumen chimeric peptide

<400> 34
Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly
1 5 10 15

Arg Val Gln Ile Lys Asp Lys Gly Ser Tyr Gln Cys
20 25

<210> 35
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Porcus spp/ovalbumen chimeric peptide

<400> 35
Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly
1 5 10 15

Arg Cys Ser Ser Thr Gln Gly Tyr Pro Glu Pro Gln Arg
20 25

<210> 36
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Porcus spp/ovalbumen chimeric peptide

<400> 36
Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly
1 5 10 15

Arg Lys Ser Gln Ala Tyr Phe Asn Glu Thr Gly Glu Leu
20 25

<210> 37
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Porcus spp/ovalbumen chimeric peptide

<400> 37
Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly
1 5 10 15

Arg Ala Ser Leu Lys Ser Gln Ala Tyr Phe Asn Glu Thr

20 25

<210> 38
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Porcus spp/ovalbumen
      chimeric peptide

<400> 38
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Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly
 1               5                  10                  15

Arg Tyr Met Gly Arg Thr Ser Phe Asp Gln Ala Thr Trp Thr
             20                  25                  30
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<210> 39
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Porcus spp/ovalbumen
      chimeric peptide

<400> 39
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Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu Ala Gly
 1               5                  10                  15

Arg
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